

AMENDMENTS TO THE CLAIMS

Please cancel and amend the claims as shown in the following listing of claims. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)
2. (Currently Amended) The method of claim 26 ~~claim 44~~, wherein said vessel wall-penetrating elements ~~edges~~ include barbs.
3. (Withdrawn – Currently Amended) The method of claim 26 ~~claim 44~~, wherein said one or more pieces of flexible material ~~edges~~ include an adhesive applied thereto.
- Claims 4-9 (Cancelled)
10. (Currently Amended) The method of claim 26 ~~claim 44~~, wherein said first edge is a reinforced edge ~~edges are reinforced edges~~.
11. (Currently Amended) The method of claim 10, wherein said reinforced edge has ~~reinforced edges have~~ a thickness greater than a central portion of said first piece ~~one or more pieces~~ of flexible material.
12. (Cancelled)

13. (Currently Amended) The method of claim 26 ~~claim 44~~, wherein said vessel wall-penetrating elements include hooks ~~edges have a plurality of structural elements for attaching to said walls.~~

14. (Currently Amended) The method of claim 2 ~~claim 13~~, wherein said ~~structural elements include~~ barbs penetrate said first piece of flexible material.

Claims 15-25 (Cancelled)

26. (Currently Amended) A method for modifying blood flow in a vascular vessel, the method comprising:

percutaneously delivering one or more pieces of flexible material to a site within a vascular vessel, said one or more pieces of flexible material including a first piece of flexible material having a first edge, said first piece of flexible material having extending therefrom an array of vessel wall-penetrating elements extending longitudinally proximate said first edge, said array having a width extending in a direction inward of said first edge and having vessel wall-penetrating elements occurring generally laterally with respect to one another in the direction of said width; and

percutaneously attaching at least portions of said one or more pieces of flexible material to walls of the vascular vessel so as to form a structure that selectively permits blood flow in a first direction and resists blood flow in a second direction, said percutaneously attaching including driving vessel wall-penetrating elements of said array into a wall of the vascular vessel

so as to secure a corresponding band of said first piece of flexible material to said vascular vessel wall.

27. (Currently Amended) The method of claim 26, wherein said first piece of flexible material has remodelable properties.

28. (Currently Amended) The method of claim 26, wherein said first piece of flexible material contains collagen.

29. (Currently Amended) The method of claim 26, wherein said first piece of flexible material comprises an extracellular matrix material.

30. (Currently Amended) The method of claim 29, wherein said extracellular ~~extracellular~~ matrix material contains collagen.

31. (Original) The method of claim 30, wherein said extracellular matrix material comprises submucosa.

32. (Original) The method of claim 26, wherein said structure includes a valve having two or more leaflets.

33. (Withdrawn – Currently Amended) The method of claim 26, wherein said one or more pieces of flexible material ~~comprise~~ comprises collagen, and wherein said percutaneously attaching includes delivering energy to facilitate attachment of said portions to the walls.

34. (Withdrawn) The method of claim 33, wherein said energy includes electromagnetic radiation.

35. (Withdrawn) The method of claim 34, wherein said energy is selected from microwave, radio frequency, laser, and ultraviolet light energy.

36. (Withdrawn – Currently Amended) The method of claim 33, wherein an energy-absorbing substance is provided in contact with said portions, and wherein said energy activates the energy-absorbing substance to attach said portions to the walls.

37. (Withdrawn – Currently Amended) The method of claim 33, wherein the energy welds said portions to the walls.

38. (Currently Amended) The method of claim 26, wherein said percutaneously delivering comprises deploying the one or more pieces of flexible material from a lumen of a percutaneously advancable device.

39. (Currently Amended) The method of claim 38, wherein said percutaneously delivering comprises deploying a delivery structure from the lumen, the delivery structure including the one or more pieces of flexible material releasably held to an expandable element.

40. (Original) The method of claim 39, wherein the expandable element includes a balloon.

41. (Withdrawn) The method of claim 38, wherein the expandable element includes a wire structure.

42. (Currently Amended) The method of claim 26, wherein said ~~attaching includes~~ attaching a band of said flexible material is secured to said vascular vessel wall in a path extending at least partially longitudinally and at least partially circumferentially along the wall.

43. (Cancelled)

44. (Cancelled)

45. (New) The method of claim 2, wherein said barbs include microbarbs having a diameter ranging from about 0.0005 inches to about 0.100 inches.

46. (New) The method of claim 2, wherein said barbs include microbarbs having a diameter of up to about 0.010 inches.

47. (New) The method of claim 46, wherein said diameter is at least about 0.005 inches.

48. (New) The method of claim 2, wherein said barbs include microbarbs having a length ranging from about 0.001 inches to about 0.50 inches.

49. (New) The method of claim 2, wherein said barbs include microbarbs having a length of up to about 0.100 inches.

50. (New) The method of claim 49, wherein said length is at least about 0.01 inches.